

ABSTRACT OF THE DISCLOSURE

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3 The present invention provides a method for preparing silica containing
4 molecular sieves which may be mixed with an organic polymer to create a
5 mixed matrix membrane. Further, this invention includes a method of making
6 such a mixed matrix membrane and the membrane itself. A process for
7 separating component gases from a mixture using the subject mixed matrix
8 membrane is also described. The method for preparing silica containing
9 molecular sieves comprises super water washing silica containing molecular
10 sieves to produce water washed molecular sieves which are substantially free
11 of surface remnants. Super water washing also ideally lowers the
12 concentration of alkali metals in the molecular sieves. The water washed
13 sieves are sufficiently free of surface remnants such that when the water
14 washed sieves are subjected to a Sieve Wash Conductivity Test, a wash
15 filtrate is produced having a conductivity of less than 110 micro mhos/cm,
16 more preferably less than 80 micro mhos/cm, even more preferably less than
17 50 micro mhos/cm, and most preferably less than 30 micro mhos/cm. It is
18 believed that super washing the sieves to this degree will enhance, compared
19 to conventional preparation techniques, the ability of the molecular sieves to
20 bond with an organic polymer to form a highly selective and permeable mixed
21 matrix membrane.